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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,005	12/07/2005	William Harry Lynn	926512-100868	1097

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EXAMINER

LAZO, THOMAS E

ART UNIT	PAPER NUMBER
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3745

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.		Applicant(s)	
	10/595,005		LYNN ET AL.	
	Examiner		Art Unit	
	Thomas E. Lazo		3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 10 is/are rejected.
- 7) ☒ Claim(s) 3-9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/07/05</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

Claims 2 and 6 are objected to because of the following informalities:

In claim 2, line 1, "nutating" should be --wobble--.

In claim 6, line 1, "claim 1" should be --claim 2-- to provide antecedent basis for the ball socket claimed in claim 7.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reitzig (6,886,484) in view of Lynn (6,074,174). Reitzig discloses a nutating pump with a pump housing 1, a prime mover, a drive shaft 2 driven by the prime mover, a plurality of pump cylinders 9, a plurality of pistons 7, a wobble member 35, and a universal joint 36 connecting the wobble member 35 to the housing 1. Reitzig does not disclose that the pistons are wobble pistons, wherein the wobble piston have a piston head and a piston rod fixedly connected to the piston head, the pistons are received in the associated pumping cylinders in a fit that permits wobbling motion of the piston head relative to the pumping cylinder as the piston is reciprocated,

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the piston rods are connected to the wobble member, and the piston head has a cup seal that forms a sliding seal with the associated pumping cylinder.

Lynn teaches for a nutating pump with a pump housing 11, a prime mover 10, a drive shaft driven by the prime mover 10, a plurality of pump cylinders 22 and that there are wobble pistons 46, wherein the wobble pistons 46 have a piston head 47 and a piston rod fixedly connected to the piston head 47, the pistons 46 are received in the associated pumping cylinders 22 in a fit that permits wobbling motion of the piston head 47 relative to the pumping cylinder 22 as the piston 46 is reciprocated, the piston rods are connected to the wobble member 40, and the piston head 47 has a cup seal 49 that forms a sliding seal with the associated pumping cylinder for the purposes of providing a simple and effective pumping apparatus. See Lynn col. 1, lines 41-45.

Since Reitzig and Lynn are both nutating pumps, it would have been obvious to one of ordinary skill in the art at the time of the present invention to modify the nutating pump of Reitzig, based on the teachings of Lynn, to include wobble pistons, wherein the wobble pistons have a piston head and a piston rod fixedly connected to the piston head, the pistons are received in the associated pumping cylinders in a fit that permits wobbling motion of the piston head relative to the pumping cylinder as the piston is reciprocated, the piston rods are connected to the wobble member, and the piston head has a cup seal that forms a sliding seal with the associated pumping cylinder for the purposes of providing a simple and effective pumping apparatus.

Claims 1, 2, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reitzig (6,886,484) in view of Abousabha et al. (5,079,996). Reitzig discloses a nutating pump

with a pump housing 1, a prime mover, a drive shaft 2 driven by the prime mover, a plurality of pump cylinders 9, a plurality of pistons 7, a wobble member 35, and a universal joint 36 connecting the wobble member 35 to the housing 1. Reitzig does not disclose that the pistons are wobble pistons, wherein the wobble piston have a piston head and a piston rod fixedly connected to the piston head, the pistons are received in the associated pumping cylinders in a fit that permits wobbling motion of the piston head relative to the pumping cylinder as the piston is reciprocated, the piston rods are connected to the wobble member, the piston head has a cup seal that forms a sliding seal with the associated pumping cylinder, and the wobble member is connected to the piston rods with a ball and socket joint.

Abousabha et al teaches for a nutating pump with a pump housing 12, a prime mover, a drive shaft driven by the prime mover, a plurality of pump cylinders 27 and that there are wobble pistons 26, wherein the wobble pistons 26 have a piston head and a piston rod 32 fixedly connected to the piston head, the pistons 26 are received in the associated pumping cylinders 27 in a fit that permits wobbling motion of the piston head relative to the pumping cylinder 27 as the piston 26 is reciprocated, the piston rods 32 are connected to the wobble member 24, the piston head has a cup seal that forms a sliding seal with the associated pumping cylinder 27, and the wobble member 24 is connected to the piston rods 32 with a ball 34 and socket 30 joint for the purposes of providing a simple and effective pumping apparatus. See Abousabha et al. col. 2, lines 62-68.

Since Reitzig and Abousabha et al are both nutating pumps, it would have been obvious to one of ordinary skill in the art at the time of the present invention to modify the nutating pump of Reitzig, based on the teachings of Abousabha et al., to include wobble pistons, wherein the

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wobble pistons have a piston head and a piston rod fixedly connected to the piston head, the pistons are received in the associated pumping cylinders in a fit that permits wobbling motion of the piston head relative to the pumping cylinder as the piston is reciprocated, the piston rods are connected to the wobble member, the piston head has a cup seal that forms a sliding seal with the associated pumping cylinder, and the wobble member is connected to the piston rods with a ball and socket joint for the purposes of providing a simple and effective pumping apparatus.

Allowable Subject Matter

Claims 3-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Contact Information

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Thomas Lazo whose telephone number is (571) 272-4818. The examiner can normally be reached on Monday-Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Edward Look, can be reached on (571) 272-4820. The fax phone number for this Group is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thomas E. Lazo
Primary Examiner
Art Unit 3745
February 28, 2007